CME OUTFITTERS

The Opioid REMS Advantage: Supporting Providers, Protecting Patients

Supported by an independent educational grant from Opioid Analgesic REMS Program Companies.

In support of improving patient care, CME Outfitters LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Activity Credit Types

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Pharmacists (ACPE): This application-based activity is approved for 1.5 contact hours (0.15 CEUs) of continuing pharmacy credit (JA0007185-0000-25-100-L08-P).

Through an agreement between the Accreditation Council for Continuing Medical Education and the Royal College of Physicians and Surgeons of Canada, medical practitioners participating in the Royal College MOC Program may record completion of accredited activities registered under the ACCME's "CME in Support of MOC" program in Section 3 of the Royal College's MOC Program.

CME for MIPS IMPROVEMENT ACTIVITY

Completion of this accredited CME activity meets the expectations of an Accredited Safety or Quality Improvement Program (IA_PSPA_28) for the Merit-based Incentive Payment Program (MIPS). Clinicians should submit their improvement activities by attestation via the CMS Quality Payment Program website.

ABIM CME MOC ACCREDITED

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CME OUTFITTERS

Activity Credit Types

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The AAFP has reviewed The Opioid REMS Advantage: Supporting Providers, Protecting Patients and deemed it acceptable for up to 1.50 Live AAFP Prescribed credit(s). Term of Approval is from 10/14/2025 to 10/14/2025. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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This activity is supported by an independent educational grant from Opioid Analgesic REMS Program Companies.

Please see
https://www.opioidanalgesicrems.com/Resources/Docs/List_of_RPC_Companies.pdf
for a listing of REMS Program Companies.

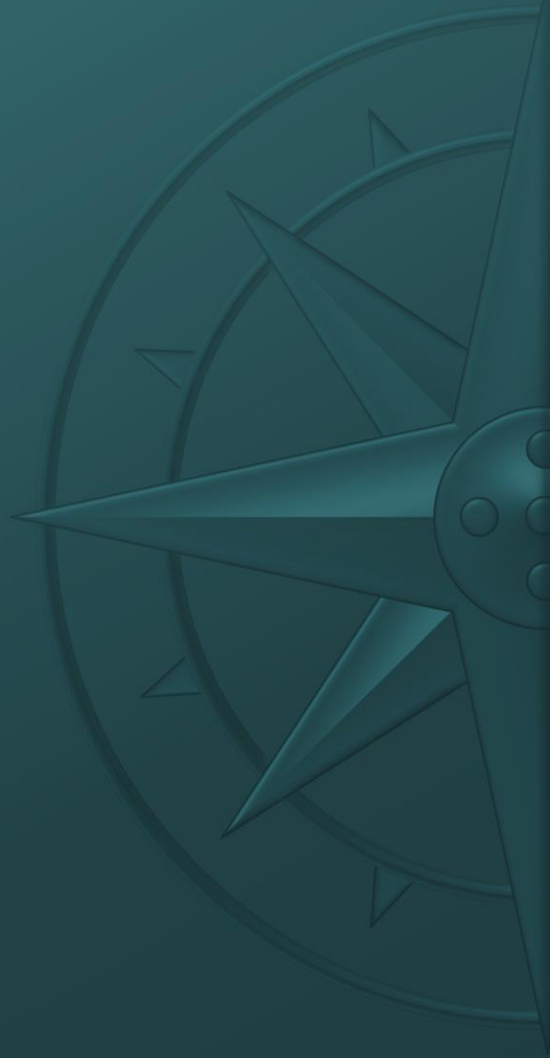
This activity is intended to be fully compliant with the Opioid Analgesic REMS education requirements issued by the U.S. Food and Drug Administration (FDA).

This activity may include discussions of products or devices that are not currently labeled for use by the U.S. FDA.

The faculty have been informed of their responsibility to disclose to the audience if they will be discussing off-label or investigational uses (any uses not approved by the FDA) of products or devices.

To Ask a Question

To submit a question, please go to the *Ask Question* tab at the bottom of the screen.



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Consultant— Abbott; Saluda Medical; and Stratus Medical

Carrie Hyde, MD reports no financial relationships to disclose.

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- Thai Nguyen, MD, MHA (peer reviewer)
- Michael Franks, APRN, AGACNP-BC, FNP-BC (peer reviewer)
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All identified conflicts of interest have been mitigated.

LEARNING OBJECTIVE 1

Identify physiologic & biopsychosocial factors that influence different etiologies of pain

LEARNING OBJECTIVE 2

Utilize pain assessment tools that reinforce approaches to the appropriate management of pain

LEARNING OBJECTIVE 3

Implement strategies from the 2022 CDC Guideline for Prescribing Opioids into the development of safe and effective pain management plans for patients with acute, subacute, and chronic pain

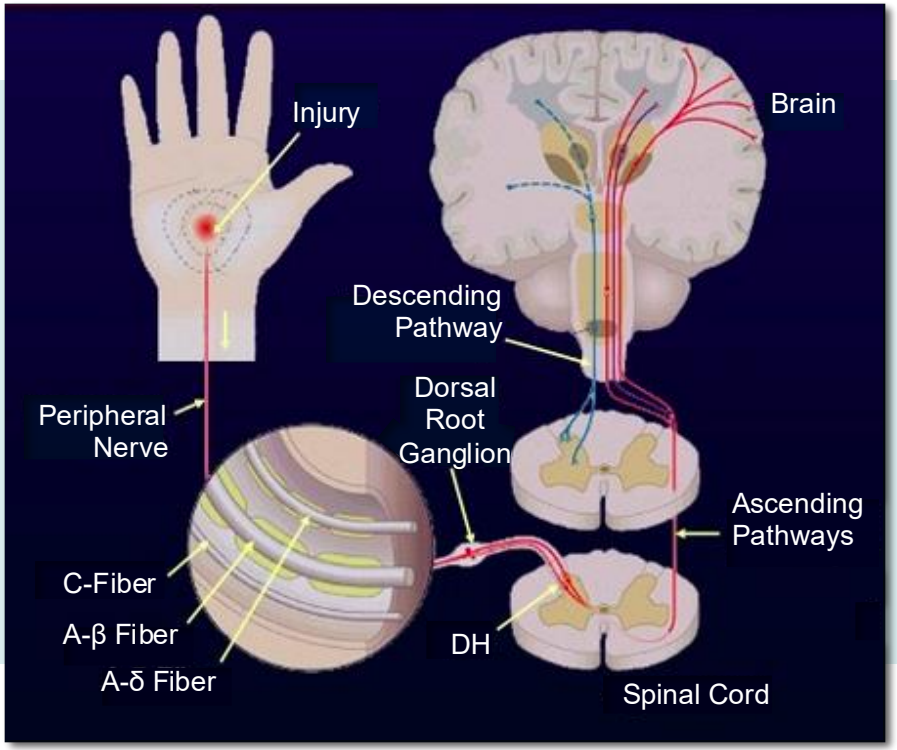
LEARNING OBJECTIVE 4

Counsel patients on multimodal pain management to optimize safe and effective, multimodal treatment plans as well as safe storage and disposal

LEARNING OBJECTIVE 5

Evaluate opioid nonmedical use risk when developing multimodal pain management plans

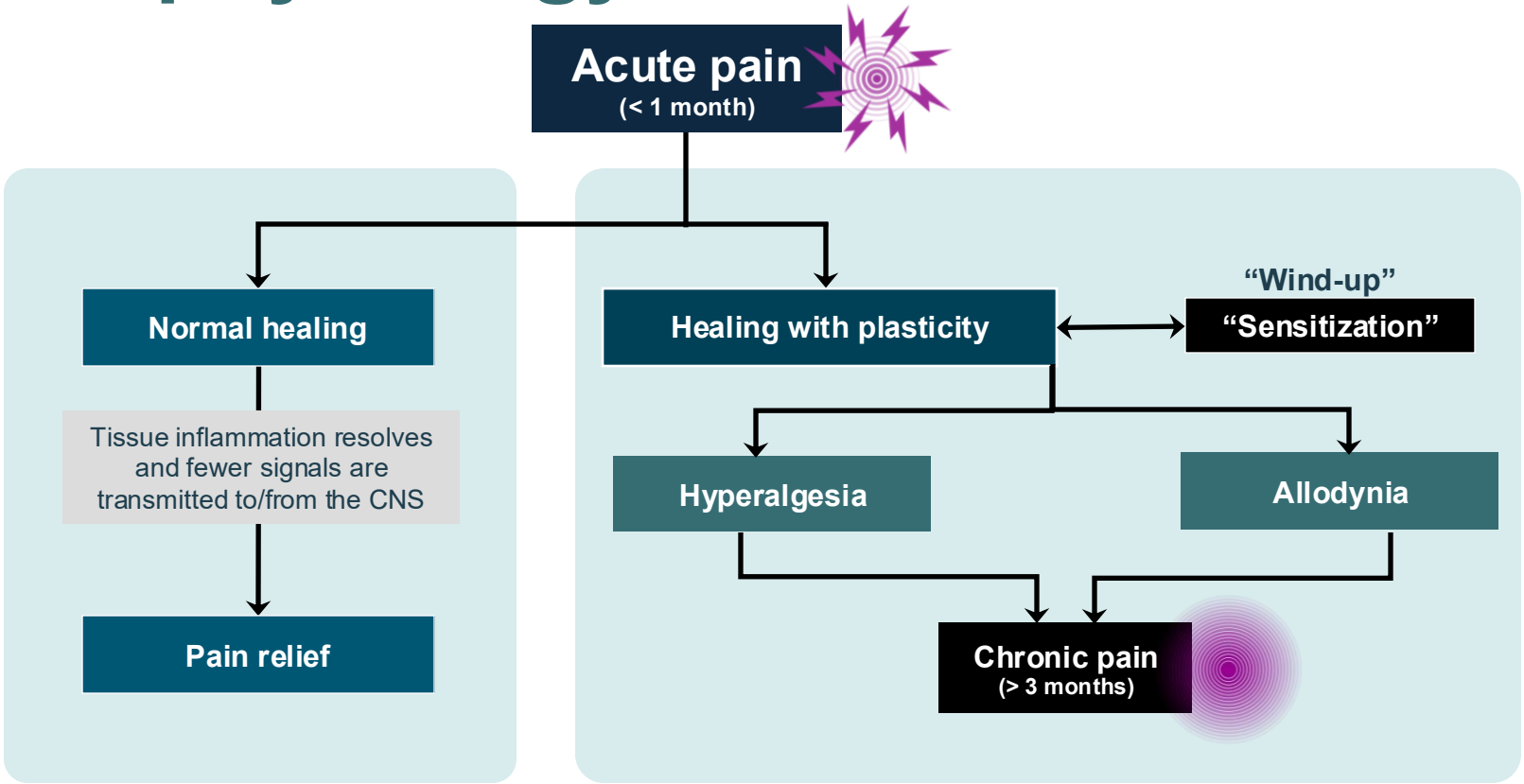
Physiology of Pain Perception



- Transduction
- Transmission
- Modulation
- Perception
- Interpretation
- **Behavior**

DH = dorsal horn. Yang JY. *Asian Spine Journal.* 2010;4(1)57-63. Osterweis M, et al. The anatomy and physiology of pain. In: *Pain and Disability: Clinical, Behavioral, and Public Policy Perspectives.* 1987. https://www.ncbi.nlm.nih.gov/books/NBK219252/.

Pathophysiology of Pain



CNS = central nervous system

Adapted from Marcus DA. *Am Fam Physician*. 2000;61(5):1331-1338.

The Biopsychosocial Model of Pain

- Nociception
- Genetics/epigenetics
- Pain pathology
- Inflammatory pathways

- Stress and coping
- Catastrophizing
- Depression/anxiety
- Cognition

- Sleep
- Nutrition/diet
- Exercise/mobility
- Substance use

- Social exclusion
- Discrimination
- Stigmatization
- Employment/income

Adams LM, et al. *J Appl Behav Res*. 2018;23:e12125. Darnall BD, et al. *Pain Med*. 2017;18(8):1413-1415.
Robinson-Lane SG, et al. *J Gerontol Nurs*. 2017;1-8. McClendon J, et al. *Arthritis Care Res (Hoboken)*. 2021;73(1):11-17.

Pain Assessment Tools

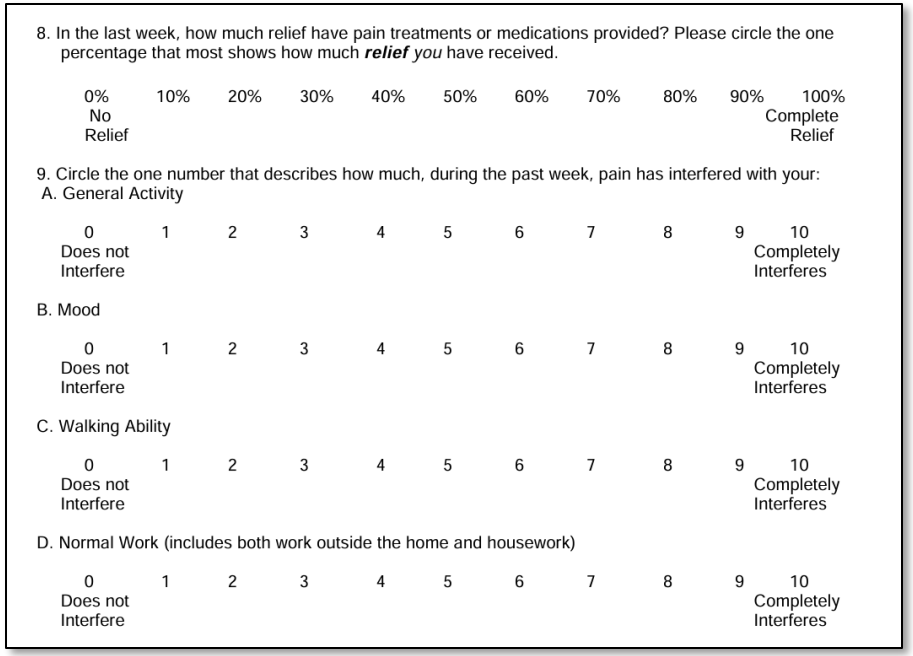
- Pain severity and pain interference subscales from the Brief Pain Inventory (BPI)
- Defense and Veterans Pain Rating Scale (DVPRS)
- Michigan Body Map (MBM)
- PainDETECT questionnaire (PD-Q)
- Patient-Reported Outcomes Measurement Information System Pain Interference (PROMIS-PI) scales
- Ambulatory assessment of pain intensity, including the use of Ecological Momentary Assessment (EMA) and daily pain diaries

Hassett AL, et al. *Arthritis Care Res (Hoboken)*. 2020;72 Suppl 10:342-357.

Brief Pain Inventory (BPI)

15 item (short version) validated assessment of pain intensity and pain interference

- Assesses the presence of pain
- Pain intensity (worst, least, average, and current)
- Pain location (body map)
- Impact of pain interference on general activity
- Mood
- Walking ability
- Normal work
- Relationships with others
- Sleep
- Life enjoyment
- Helps clinicians document pain medications used and the relief provided by those medications as well as other pain treatments



8. In the last week, how much relief have pain treatments or medications provided? Please circle the one percentage that most shows how much ***relief*** *you* have received.

0% No Relief | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% Complete Relief

9. Circle the one number that describes how much, during the past week, pain has interfered with your:

A. General Activity

0 Does not Interfere | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Completely Interferes

B. Mood

0 Does not Interfere | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Completely Interferes

C. Walking Ability

0 Does not Interfere | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Completely Interferes

D. Normal Work (includes both work outside the home and housework)

0 Does not Interfere | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Completely Interferes

Hassett AL, et al. *Arthritis Care Res (Hoboken)*. 2020;72 Suppl 10:342-357.

Patient Case: MJ

PART 1

- MJ is a 53-year-old man who presents with work-related injury
- MJ is a construction worker who sustained shoulder and hip trauma after falling off scaffolding on a construction site
- Assessment: Acute injury

Talking to Patients About Pain: Discussion Outline

Explain pain

- Include central sensitization (in lay terms)

Hurt vs. harm

Ask about their expectations

- What are their functional goals?

Talk about other modalities, activation

Set very achievable and realistic short-term goals

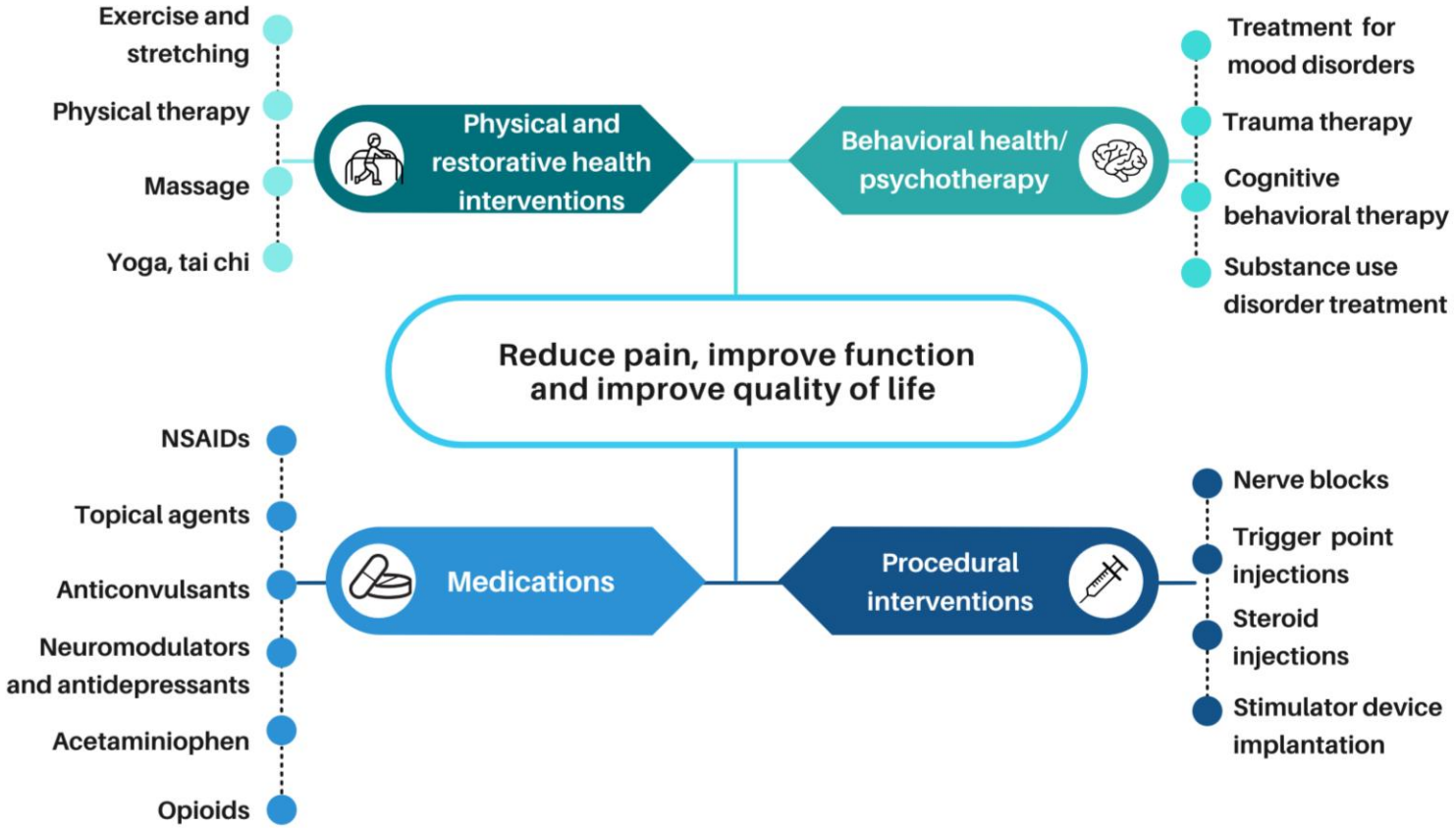
Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. U.S. Food and Drug Administration [FDA]. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain*. 2023. https://www.fda.gov/media/173774/download?attachment.

Consequences of Untreated or Undertreated Pain

- Reduced quality of life, impaired physical function, and high economic costs
- Physical disability, fear, anger, depression, anxiety, and reduced ability to carry out the roles of family member, friend, and employee
- **It is critical for clinicians to recognize these consequences EARLY and understand available options for analgesic therapies**

Katz N. *J Pain Symptom Manage*. 2002;24(1 Suppl):S38-47. Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95.

Multimodal Approach to Pain Care



NSAIDs = non-steroidal anti-inflammatory drugs

Dale R, et al. *Med Clin North Am.* 2016;100(1):55-64. Dowell D, et al. *MMWR Recomm Rep.* 2022;71(3):1-95.

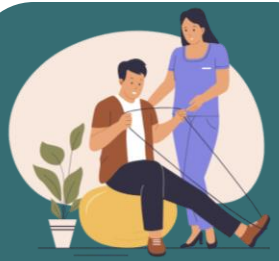
Non-Pharmacologic Treatment Options for Acute Pain

Self-Care

- Ice
- Heat
- Rest
- Immobilization
- Elevation of affected limb

Complementary and Integrative Therapies

- Acupuncture
- Massage
- Chiropractic therapy



Rehabilitation Therapies

- Physical therapy (PT)
- Occupational therapy (OT)

Exercise

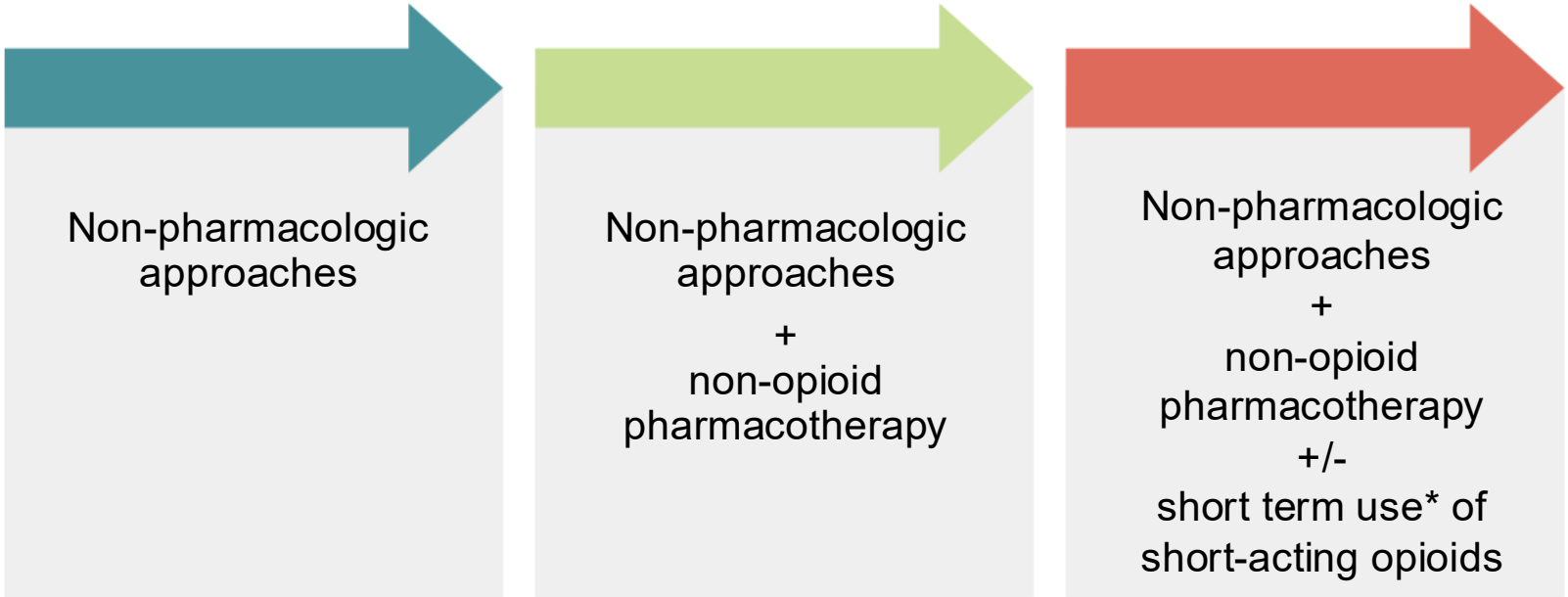
- Stretching
- Swimming
- Walking
- Tai chi
- Yoga
- Chair exercises

Psychosocial Interventions

- Cognitive behavioral therapy (CBT)
- Acceptance and commitment therapy (ACT)
- Progressive relaxation therapy
- Mindfulness-based therapies
- Behavior groups

U.S. Centers for Disease Control and Prevention [CDC]. 2022. https://www.cdc.gov/overdose-resources/hcp/files/non-opioid-therapies-for-pain-a-clinical-reference.html.

Step Approach to Acute Pain Management



*Short-term use is approximately 3 to 5 days

CDC. *Nonopioid Therapies for Pain: A Clinical Reference.* 2022. https://www.cdc.gov/overdose-resources/pdf/DOP_Nonopioid_Tool_508_FINAL.pdf.
Dey S, et al. *Alternatives to Opioids for Managing Pain*. 2025. https://www.ncbi.nlm.nih.gov/books/NBK574543/.

Patient Case: MJ

PART 1: RESOLUTION

- Treatment: PT, weight loss, NSAIDs, CBT (telehealth)
- Resolution: Multimodal management resulted in pain reduction and increase in function, ability to return to work

Examples of Topical Non-Opioid Medications

NSAIDs	• Diclofenac formulations: gels, solution, or patch • Use: topical anti-inflammatory for localized OA pain in knee, ankle, shoulder, and wrist (insufficient data for LBP) • Common adverse events – skin irritation; less potential for GI bleed, liver damage, heart attack and stroke compared to oral NSAIDs; thought to be safer for patients on oral anticoagulants
Lidocaine	• Lidocaine formulations: patch, gel, cream, or ointment • Use: peripheral neuropathic pain • Blocks abnormal peripheral neuronal conduction • Systemic absorption is very low when applied to intact skin • Common adverse events – skin irritation
Methyl Salicylate	• Methyl salicylate formulations: cream, ointment, or patch • Use: local/regional effect for musculoskeletal pain • Counterirritant causing mild inflammation which results in a deeper pain relief • Common adverse events – skin irritation. Avoid use with other salicylates
Capsaicin	• Capsaicin formulations: cream, ointment, or patch • Use: peripheral neuropathic pain and musculoskeletal pain • Depletes substance P with daily use leading to desensitization of sensory nerve fibers and resulting in less pain • Must use multiple times a day every day to maintain effect • Common adverse events – skin irritation

GI = gastrointestinal; OA = osteoarthritis; LBP = lower back pain

Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Amaechi O, et al. *Am Fam Physician*. 2021;104(1):63-72.
Qaseem A, et al. *Ann Intern Med*. 2020;173(9):739-748.

Examples of Oral Non-Opioid Medications

Acetaminophen	• First-line therapy for the treatment of OA and MSK pain • Not associated with GI ulcer • Maximum dosage 2000 mg/d in liver disease and 4000 mg/d without liver disease; caution with combination products • Common adverse events – nausea, liver damage when used in excess and/or with alcohol misuse
NSAIDs	• First-line agent for MSK pain, acute and chronic LBP; has more risks than APAP in patients with certain comorbid conditions or risk for GI ulcer • Trial more than one NSAID (variability in patient response) • Adding an NSAID to a pain regimen containing an opioid may have an opioid-sparing effect (~20-35%) • Common adverse events – nausea, GI bleed (higher risk with concomitant oral anticoagulants), liver damage, heart attack, stroke
Non-BZD skeletal muscle relaxants	• Use for acute or exacerbation of chronic lower back pain or neck pain with muscle spasms, short term use (< 7 days) • Recommend against using carisoprodol due to potential for abuse/and or misuse • Common adverse events/warnings – drowsiness; avoid driving, operating heavy machinery, and ETOH; combination with opioids, benzodiazepines can cause CNS depression
NaV1.8 pain signal inhibitor	• Indication: moderate to severe acute pain in adults (studied duration of use for 14 days maximum in acute pain) • Novel MOA: tonic inhibition of NaV1.8 reduces pain signals in primary human DRG sensory neuron • Common adverse events – itching, muscle spasms, elevated creatine phosphokinase • Contraindication: Do not use with strong CYP3A4 inhibitors, dose reduction with moderate CYP3A4 inhibitor

APAP = acetaminophen; BZD = benzodiazepine; DRG = dorsal root ganglion; ETOH = ethyl alcohol; MOA = mechanism of action; MSK = musculoskeletal

Dowell D, et al. *MMWR Recomm Rep.* 2022;71(3):1-95. Amaechi O, et al. *Am Fam Physician*. 2021;104(1):63-72. Qaseem A, et al. *Ann Intern Med.* 2020;173(9):739-748. Suzetrigine [package insert]. https://www.accessdata.fda.gov/drugsatfda_docs/label/2025/219209s000lbl.pdf. Osteen JD, et al. *Pain Ther.* 2025;14(2):655-674.

Examples of Oral Non-Opioid Medications

Antidepressants	• Neuropathic pain – general (TCAs*, venlafaxine*, duloxetine) • Diabetic peripheral neuropathy (duloxetine) • Fibromyalgia (duloxetine, milnacipran) • Headache prophylaxis (TCAs*) • Chronic musculoskeletal pain (duloxetine) • Analgesic effect often at lower dose than antidepressant effect • Common adverse events – TCAs - sedation, dry mouth, constipation, orthostasis, QT prolongation; SNRIs - nausea, insomnia, increased BP
Anticonvulsants	• Neuropathic pain – general: gabapentinoids (gabapentin*, pregabalin*), sodium channel blockers (carbamazepine*, oxcarbazepine*) • Diabetic peripheral neuropathy: gabapentin*, pregabalin • Postherpetic neuralgia: gabapentin, pregabalin • Fibromyalgia: pregabalin • Trigeminal neuralgia: carbamazepine, oxcarbazepine* • Spinal cord injury-associated neuropathic pain: pregabalin • Common adverse events – gabapentinoids - dizziness, somnolence, edema, weight gain; misuse potential when combined with opioids; sodium channel blockers - hyponatremia, leukopenia, rash

*Not FDA approved for this indication
BP = blood pressure; SNRI = serotonin-norepinephrine reuptake inhibitor; TCA = tricyclic antidepressant
Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Amaechi O, et al. *Am Fam Physician*. 2021;104(1):63-72. Qaseem A, et al. *Ann Intern Med*. 2020;173(9):739-748. CDC. *Nonopioid Therapies for Pain: A Clinical Reference*. 2022. https://www.cdc.gov/overdose-resources/pdf/DOP_Nonopioid_Tool_508_FINAL.pdf.

Patient Case: MJ

PART 2

- Following a multi-vehicle car accident, MJ has multiple rib fractures, fractures in his left hip and lower leg that will require surgery

CDC 2022 Guidelines: Key Principles

- Establish clear treatment goals for pain and function
- Opioids are not first-line therapy in many cases
- Discuss risks and benefits with patients before starting and during treatment, evaluate AEs at each visit. Evaluate benefits and harms frequently
- Review the prescription drug monitoring program (PDMP) at initiation and every 3 months for any controlled substance
- Use immediate-release opioids when initiating. Fentanyl or long-acting opioids such as methadone and oxycodone ER should not be prescribed to opioid-naïve patients
- Prescribe the lowest effective dose of any pain medication; avoid increasing total opioid dose > 90 MME
- Prescribe short durations for acute pain (3–7 days)
- Use multimodal pain management
- Incorporate risk mitigation strategies: naloxone co-prescription to patients who may be at increased risk for overdose (e.g., > 50 MME/day), patient provider agreements (PPA), urine drug screening
- Avoid concomitant use of opioids and other CNS depressants (e.g., benzodiazepines)
- Offer a naloxone co-prescription to patients who may be at increased risk for overdose (e.g., > 50 MME/day)
- Use tools such as urine drug screening as appropriate
- Offer treatment for opioid use disorder when indicated, use tools such as urine drug screening as appropriate
- Taper gradually when discontinuing

AE = adverse event; ER = extended release; MME = morphine milligram equivalent

Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Opioid Analgesic REMS. *Patient Counseling Guide.* https://www.opioidanalgesicrems.com/Resources/Docs/patient_counseling_document.pdf. FDA. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain*. 2023. https://www.fda.gov/media/173774/download?attachment.

CDC 2022 Guidelines: Patient Counseling

- Importance of adherence to prescribed dosing regimen
- Patients should use the least amount of medication necessary to treat pain and for the shortest amount of time
- The risk of serious adverse events that can lead to death
- The risk of addiction that can occur even when product is used as recommended
- Known risk factors for serious adverse events, including signs and symptoms of overdose and opioid-induced respiratory depression, gastrointestinal obstruction, and allergic reactions, among others
- The most common side effects, along with the risk of falls, working with heavy machinery, and driving
- When to call the prescriber (e.g., managing adverse events, ongoing pain)
- How to handle missed doses
- The importance of full disclosure of all medications and supplements to all health care professionals (HCPs) and the risks associated with the use of alcohol and other opioids/benzodiazepines
- Product-specific concerns (such as not to crush or chew extended-release products, transdermal systems and buccal films should not be cut, torn, or damaged before use, etc.)
- How to safely taper dose to avoid withdrawal symptoms
- Safe storage and disposal (e.g., in-home disposal systems, kiosks, take back programs, mail back envelopes), risks of accidental exposure, and risks of diversion by family members and household visitors
- Never share any opioid analgesic with another person
- How and when to use naloxone products and their various means of administration
- Seeking emergency medical treatment if an opioid overdose occurs
- How to report adverse events and medication errors to the FDA

Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Opioid Analgesic REMS. *Patient Counseling Guide*. https://www.opioidanalgesicrems.com/Resources/Docs/patient_counseling_document.pdf. FDA. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain*. 2023. https://www.fda.gov/media/173774/download?attachment.

Opioid Mechanisms of Action and Characteristics

Opioid	Formulation (Short vs. Long-acting)	Mechanism of Action	Key Clinical Notes
Acetaminophen with Codeine	Short-acting	Codeine = prodrug → metabolized to morphine via CYP2D6	Variable efficacy due to genetic metabolism, not recommended in children (respiratory depression risk)
Buprenorphine (patch)	Long-acting (partial agonist)	Partial mu-agonist; kappa antagonist; ceiling effect on respiratory depression	Safer profile, lower misuse risk, can precipitate withdrawal if full agonist on board
Fentanyl (patch)	Long-acting (transdermal)	Highly potent synthetic mu-opioid agonist	Only for opioid-tolerant, heat ↑ absorption → risk of overdose
Hydrocodone	Short-acting, ER available	Mu-opioid receptor agonist	Commonly combined with acetaminophen, risk of hepatotoxicity with high APAP doses
Hydromorphone	IR & ER	Potent mu-opioid agonist (~5x morphine)	Useful in renal impairment (fewer active metabolites), potent → dosing errors possible
Methadone	ER	Mu-opioid agonist + NMDA (N-methyl-D-aspartate) antagonist + SNRI	Complex PK, long/variable half-life, risk of QT prolongation; requires specialist experience

IR = instant release; PK = pharmacokinetics. Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95.
Jamison RH, Mao, J. *Mayo Clinic Proceedings*. 2015;90(7):957-968. Drewes AM, et al. *Br J Clin Pharmacol*. 2013;75(1):60-78.

Opioid Mechanisms of Action and Characteristics

Opioid	Formulation (Short vs. Long-acting)	Mechanism of Action	Key Clinical Notes
Morphine	IR & ER	Classic mu-opioid agonist	Histamine release → pruritus, hypotension; renally cleared active metabolites
Oxycodone	IR & ER	Mu-opioid receptor agonist (some kappa activity)	High oral bioavailability, abuse-deterrent ER forms exist
Oxymorphone	ER	Potent mu-opioid agonist (metabolite of oxycodone)	Fasting administration ↑ absorption, avoid in moderate to severe hepatic impairment
Tapentadol	IR	Mu-opioid agonist + norepinephrine reuptake inhibitor	Lower abuse potential than oxycodone, avoid with other serotonergic drugs
Tramadol	IR	Weak mu-opioid agonist + serotonin/norepinephrine reuptake inhibitor	Risk of seizures & serotonin syndrome, avoid in CYP2D6 poor metabolizers

Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Jamison RH, Mao, J. *Mayo Clinic Proceedings*. 2015;90(7):957-968.
Drewes AM, et al. *Br J Clin Pharmacol*. 2013;75(1):60-78.

Morphine Milligram Equivalent Doses for Commonly Prescribed Opioids

Opioid	Conversion Factor	
Codeine	0.15	
Fentanyl transdermal (in mcg/hr)	2.4	
Hydrocodone	1.0	
Hydromorphone	5.0	
Methadone	4.7	★
Morphine	1.0	★
Oxycodone	1.5	
Oxymorphone	3.0	
Tapentadol	0.4	★
Tramadol	0.2	

★ = Special caution recommended when converting hydromorphone, methadone, and tapentadol

Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. FDA. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain*. 2023. https://www.fda.gov/media/173774/download?attachment.

Long-Acting Opioid Table

Long-Acting Opioids (use only in opioid-tolerant patients)	Example Range (mg) (always individualize to patient)	Notes (always start low, and when converting, consider incomplete opioid cross-tolerance)
Morphine ER	15–60 mg BID	Titrate slowly
Oxycodone ER	10–40 mg BID	Higher potency, caution in renal impairment
Hydrocodone ER	20–60 mg QD	Once-daily option, not for opioid-naïve patients
Hydromorphone ER	8–32 mg QD	Potent, sometimes difficult to accurately dose without experience
Oxymorphone ER	5–40 mg BID	Very potent, avoid in moderate to severe hepatic impairment
Fentanyl Patch	12–100 mcg/hr (Q72hr)	Steady delivery, patch can distribute more drug than needed when heat is applied (e.g., heating pad, hot tub), disposal can be a concern.
Methadone	2.5–10 mg TID	Complex pharmacokinetics, use only if you have expertise in prescribing, assessment, and conversions
Buprenorphine patch	5–20 mcg/hr (weekly)	Ceiling on respiratory depression, safer profile

BID = twice daily; TID = three times a day; QD = once daily. Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Kalso E, et al. *Pain*. 2004;112(3):372-380. Manchikanti L, et al. *Pain Physician*. 2011;14(2):91-121. Manchikanti L, et al. *Pain Physician*. 2017;20(2S):S3-S92.

Opioid Side Effects

Nausea	Constipation
Sedation/sleepiness	Mental confusion/dullness
Breathing issues	Cardiac concerns
Hormone dysfunction	Increased fall risk
Depression	Poor sleep
Hyperalgesia	Cravings
Tolerance	Risk for addiction

Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. FDA. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain*. 2023. https://www.fda.gov/media/173774/download?attachment. CDC. 2025. https://www.cdc.gov/overdose-prevention/about/prescription-opioids.html.

Individualizing Pain Management Plans

Assess the whole patient: Type of pain (nociceptive, neuropathic, mixed), medical and psychiatric comorbidities, substance use risk

Set functional goals: Focus on what the patient wants to do (work, sleep, daily activities), not just pain scores

Start with multimodal therapy: Combine non-pharmacologic + non-opioid pharmacologic options first

Tailor pharmacologic choices: Match drug class to pain mechanism (e.g., duloxetine for diabetic neuropathy, NSAIDs for inflammatory pain, etc.)

Reassess regularly: Adjust dose, switch therapies, taper opioids if risks outweigh benefits

Shared decision-making: Engage patient in goals, expectations, and treatment preferences

CME OUTFITTERS

Warner NS, et al. *J Gen Intern Med*. 2025;40:3232-3240. Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95.
Jamison RH, Mao, *J. Mayo Clinic* Proceedings. 2015; 90(7):957-968. Drewes AM, et al. *Br J Clin Pharmacol*. 2013;75(1):60-78.

General Principles: Initiating Opioid Therapy

Acute Pain

- Patient selection: severe pain, non-opioids inadequate
- Screening tools: ORT, COMM, PDMP check
- Consider comorbidities, drug interactions, misuse risk
- Dose: Use IR opioids, lowest effective dose, short duration (≤ 3–5 days)
- Naloxone: prescribe for patients at high risk
- Supplement with non-opioid meds & non-pharmacologic interventions

Chronic Pain

- Patient selection: only after non-opioid options tried
- Screening tools: ORT, COMM, PDMP check
- Consider comorbidities, drug interactions, misuse risk
- When switching to long-acting opioids, start and aim for the lowest effective dose
- Naloxone: prescribe for most patients
- Supplement with non-opioid meds & non-pharmacologic interventions

COMM = Current Opioid Misuse Measure; ORT = Opioid Risk Tool; PDMP = prescription drug monitoring program

Dowell D, et al. *MMWR Recomm Rep.* 2022;71(3):1-95. Opioid Analgesic REMS. *Patient Counseling Guide*. https://www.opioidanalgesicrems.com/Resources/Docs/patient_counseling_document.pdf. FDA. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain.* 2023. https://www.fda.gov/media/173774/download?attachment.

Patient Case: MJ

PART 2: RESOLUTION

- Multimodal pain care in the hospital
- Discharged home on hydrocodone/APAP 5/325 mg 1 tablet every 8 hours PRN pain, alternate with ibuprofen OTC

OTC = over the counter; PRN = as needed

General Principles: Ongoing and Long-Term Management of Opioid Therapy

Ongoing Management

- Review pain & function goals regularly
- Monitor adverse events each visit
- Review PDMP/refill history
- Monitor adherence, watch for aberrant behaviors
- Reassess need: continue only if benefits > risks
- Screen for new psych or medical conditions
- Supplement with non-opioid meds & non-pharmacologic interventions

Long-Term Management

- Review pain & function goals regularly
- Monitor adverse events each visit
- Review PDMP/refill history
- Monitor adherence, watch for aberrant behaviors
- Worsening pain: evaluate for disease progression vs. OIH vs. OUD
- Opioid rotation: reduce calculated dose 25–50% (incomplete cross-tolerance)
- Consider taper/discontinue if harms > benefits
- Supplement with non-opioid meds & non-pharmacologic interventions

OIH = opioid-induced hyperalgesia; OUD = opioid use disorder. Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95.
Opioid Analgesic REMS. *Patient Counseling Guide*. https://www.opioidanalgesicrems.com/Resources/Docs/patient_counseling_document.pdf.
FDA. *FDA's Opioid Analgesic REMS Education Blueprint for Health Care Providers Involved in the Treatment and Monitoring of Patients with Pain*. 2023. https://www.fda.gov/media/173774/download?attachment.

Opioid Tapering for Acute and Chronic Pain

Regimen Component	Approach for Acute Pain/Opioid-Naïve	Approach for Chronic Pain/Opioid-Tolerant
Goals of opioid tapering	Limit excess exposure to opioids and opioid-related adverse events once pain is improving, limit conversion to persistent opioid use if not otherwise indicated by patient condition, limit quantity of unused opioids	More complex and patient-specific, may entail tapering back to previous chronic pain or medication for opioid use disorder (MOUD) regimen (or reevaluating chronic regimen in concert with applicable prescriber), limiting opioid-related adverse events, avoiding relapse of OUD, limiting long-term adverse events related to chronic opioid exposure
Dose reduction at each step of taper	Consider decreasing daily dose by 20–25%	More gradual reductions may be needed at each step
Frequency of tapering	Every 1–2 days once pain is improving	Less frequent reductions are likely to be needed, consider every 2–7 days once acute pain improving
Total duration of taper	Most patients can successfully taper off opioids within 3–7 days after a major scheduled surgery, assuming multimodal and enhanced recovery techniques are used concurrently	Longer tapers will be needed, may take weeks to months to be successful depending on patient-specific circumstances
Other considerations	Consider reducing dose before lengthening dosing interval to help maintain smoother pain control without large peaks/valleys of analgesic effect	More multimodal therapies, psychosocial support, monitoring, and coordination of care often needed

Hyland SJ, et al. *Healthcare (Basel)*. 2021;9(3):333.

Safe Storage and Disposal of Opioids

Always counsel patients on safe storage and disposal of opioids

Safe Storage

- Keep opioids in a locked cabinet, safe, or lockbox — away from children, pets, and visitors
- Never share medications with others, even if they have similar symptoms
- Track quantities to notice missing doses early

Safe Disposal

- Use drug take-back options (preferred): DEA-authorized collection sites, mail-back programs
- National Prescription Drug Take-Back Days

Opioid Analgesic REMS. 2025. https://www.opioidanalgesicrems.com/mailBackEnvelope.html.
Drug Enforcement Agency [DEA]. https://www.dea.gov/takebackday#collection-locator.

Patient Case: MJ

PART 3

- MJ sustains a back injury
- MJ was bowling with his son and tweaked his back. He was prescribed 20 tablets of hydrocodone 10/325 mg every 8 hours for pain in urgent care
- He asks his primary care physician to continue his opioids, who referred him to a chronic pain specialist – specialist initiated treatment with oxycodone ER 10 mg every 12 hours

Audience Response

When do you use an opioid risk assessment tool?

A. I use one at initiation of opioid prescriptions and periodically thereafter

B. I use one when patients receiving opioids are displaying concerning behaviors

C. I've used one inconsistently and don't have a reliable process in place

D. Rarely, this is a difficult tool to implement in my practice setting

E. I've never used an opioid risk assessment tool. I'm open to using one

Opioid Risk Tool

Mark each box that applies	Female	Male
Family history of substance use disorder		
Alcohol	1	3
Illegal drugs	2	3
Prescription drugs	4	4
Personal history of substance use disorder		
Alcohol	3	3
Illegal drugs	4	4
Prescription drugs	5	5
Age between 16–45 years	1	1
History of preadolescent sexual abuse	3	0
Psychological disease		
ADD, OCD, bipolar, schizophrenia	2	2
Depression	1	1
Scoring totals		

ADD = attention deficit disorder; OCD = obsessive compulsive disorder

Webster LR, et al. *Pain Med*. 2005;6(6):432-42.

What Causes Addiction in Some People but not Others?

Genetics

- 40%–60% of vulnerability to addiction

Environment

- Low socioeconomic status
- Poor parental support
- Within-group peer deviance
- Physical/psychological abuse
- Unmarried status

Mental Illness

- 30% of people with psychiatric diagnoses misuse drugs
- 25% ETOH
- 40% nicotine
- 15% other drugs

American Psychiatric Association. Opioid use disorder. In: *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. 2022: pp. 541–547. https://www.psychiatry.org/psychiatrists/practice/dsm. Dowell D, et al. *MMWR Recomm Rep*. 2022;71(3):1-95. Webster LR. *Anesth Analg*. 2017;125(5):1741-1748. National Institute on Drug Abuse [NIDA]. 2024. https://nida.nih.gov/publications/research-reports/common-comorbidities-substance-use-disorders. Substance Abuse and Mental Health Services Administration [SAMHSA]. *2022 National Survey on Drug Use and Health: Detailed Tables. Rockville, MD: Center for Behavioral Health Statistics and Quality*. 2023. https://www.samhsa.gov/data/sites/default/files/reports/rpt42728/NSDUHDetailedTabs2022/NSDUHDetailedTabs2022/2022-nsduh-detailed-tables.pdf. SAMHSA. *Key Substance Use and Mental Health Indicators in the United States: Results from the 2022 National Survey on Drug Use and Health*. 2023. https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-nnr.pdf. CDC. *MMWR Morb Mortal Wkly Rep*. 2020;69(45):1736-1742.

DSM-V-TR: Opioid Use Disorder

Impaired control	- Craving or strong urge to use the substance - Desire or failed attempts to cut down or control substance use
Social problems	- Substance use causes failure to complete major tasks at work, school, or home - Social, work, or leisure activities given up/cut back because of substance use
Risky use	- Use in risky settings; continued use despite known problems
Pharmacologic effects	- Tolerance and withdrawal symptoms

American Psychiatric Association. Opioid use disorder. In: *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. 2022: pp. 541–547. https://www.psychiatry.org/psychiatrists/practice/dsm.

Loss of Control		
1	Substance taken in larger amounts or for a longer time than intended	"I didn't mean to start using so much."
2	Persistent desire or unsuccessful effort to cut down or control use of a substance	**"I've tried to stop a few times before, but I start using this drug again every time."**
3	Great deal of time spent obtaining, using, or recovering from substance use	"Everything I do revolves around using this drug." In severe cases, most/all daily activities may revolve around substance use
4	Craving (a strong desire or urge) to use opioids	**"I wanted to use so badly; I couldn't think of anything thing else."**
Social Problems		
5	Continued opioid use that causes failures to fulfill major obligations at work, school, or home	**"I keep having trouble at work/have lost the trust of friends and family because of using this drug."**
6	Continued opioid use despite causing recurrent social or personal problems	**"I can't stop using, even though it's causing problems with my friends/family/boss/landlord."**
7	Important social, occupational, or recreational activities are reduced because of opioid use	"I've stopped seeing my friends and family and have given up my favorite hobby because of drugs."
Risky Use		
8	Recurrent opioid use in dangerous situations	"I keep doing things that I know are risky and dangerous to buy or use this drug."
9	Continued opioid use despite related physical or psychological problems	**"I know that using this drug causes me to feel badly/messes with my mind, but I still use anyway."**
Pharmacological Problems		
10	**Tolerance:** Need to take higher doses of a drug to feel the same effects, or a reduced effect from the same amount	"I have to take more and more of the drug to feel the same high."
11	**Withdrawal:** Experience of pain or other uncomfortable symptoms in the absence of a drug	"When I stop using the drug for a while, I'm in a lot of pain."

Categorized based on number of criteria met, mild (2–3), moderate (4–5), severe (≥ 6 criteria)

American Psychiatric Association. Opioid use disorder. In: *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. 2022: pp. 541–547. https://www.psychiatry.org/psychiatrists/practice/dsm.

When should you refer to a pain management or addiction medicine specialist?

Patient Case: MJ

PART 3: RESOLUTION

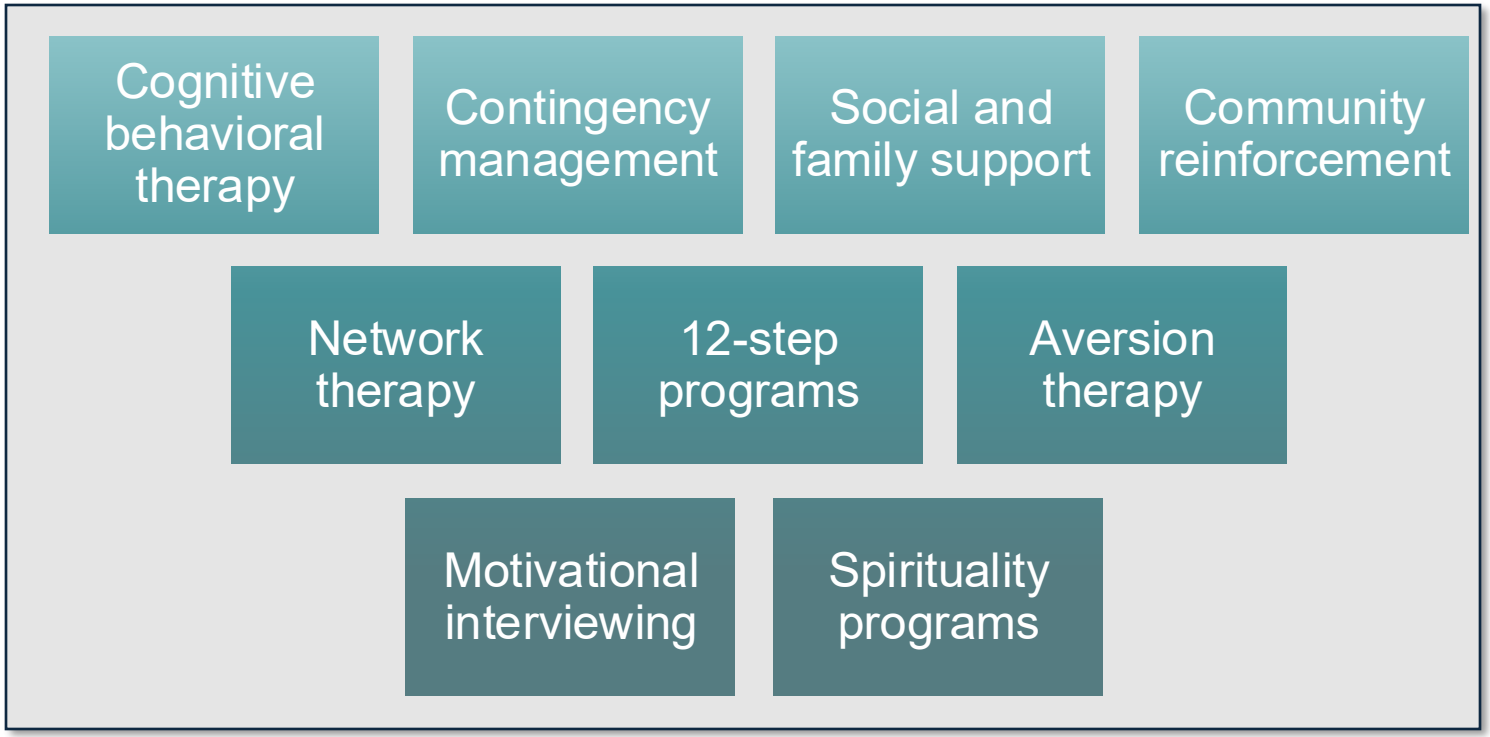
- MJ scores 11 on the Current Opioid Misuse Measure (COMM); positive ≥ 9
- DSM-V: He ran out of medications a few times. When he has tried reducing his dose, he has cravings and withdrawal symptoms
- His physician diagnoses OUD and gets him into a medication-assisted treatment (MAT) program
- Resolution: Buprenorphine treatment, CBT, structured peer recovery group, PT

Medications for Opioid Use Disorder (MOUD)

- **Long-acting pure mu-opioid agonists for chronic pain**, including continuous transdermal use or intrathecal infusions
- **Methadone**
- **Buprenorphine oral, sublingual, and buccal formulations,** including combination products with naloxone
- **Buprenorphine transdermal patch, subdermal implant, or subcutaneous implant**
- **Naltrexone oral formulations**
- **Naltrexone extended-release IM injection**

IM = intramuscular. Hyland SJ, et al. *Healthcare (Basel)*. 2021;9(3):333.

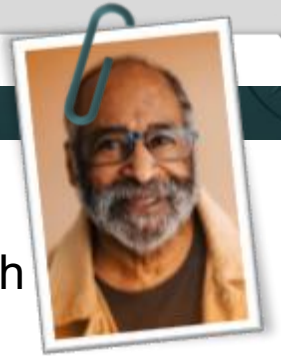
Nonpharmacologic Therapies for Substance Use Disorders/OUD



Herron AJ, Brennan TK. *The ASAM Essentials of Addiction Medicine.* 3rd Ed. 2020. https://psychiatry.lwwhealthlibrary.com/book.aspx?bookid=2669&sectionid=0.

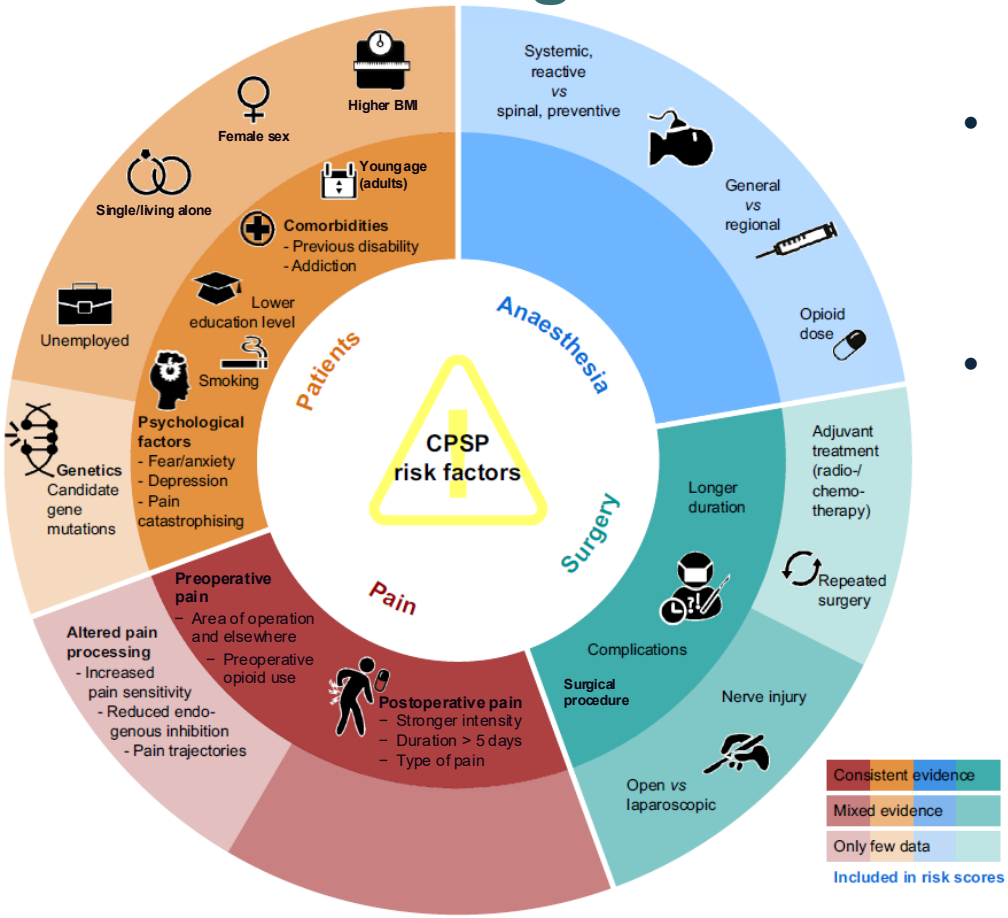
Patient Case: MJ

PART 4



- Four years later, MJ requires complex lumbar decompression and fusion for degenerative spondylosis with severe spinal stenosis and neurogenic claudication
- He has been successfully maintained on buprenorphine 8 mg TID
  - Reports strong recovery engagement and has not used illicit opioids since initiating buprenorphine therapy
  - Attends weekly CBT sessions focused on relapse prevention and chronic pain coping strategies
  - Maintains participation in a structured peer recovery group as part of his ongoing treatment plan

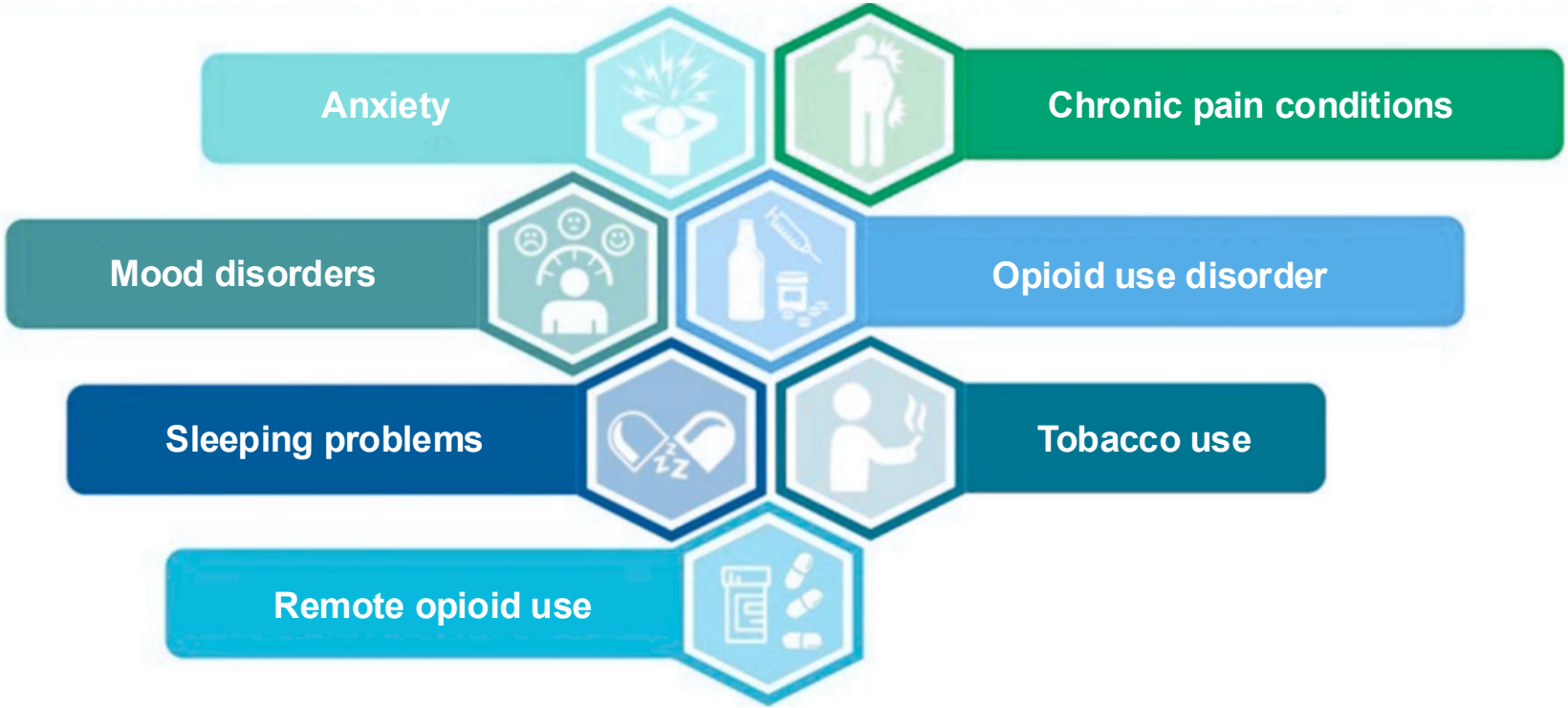
What is Postsurgical Pain?



- **Acute postoperative pain**
  - Pain occurring immediately after and up to 7 days after surgery
- **Chronic (persistent) postsurgical pain (CPSP)**
  - Pain lasting more than 3–6 months after surgery
  - Estimated 10–50% of individuals following common surgeries

Fregoso G, et al. *Pain Physician*. 2019;22(5):479-488. Rosenberger DC, et al. *BJA Educ*. 2022;22(5):190-196.

Who is at Risk for Persistent Postoperative Opioid Use?



Larach DB, et al. *Anesthesiology.* 2022;136(4):594-608.

Management of LTOT and OUD for Perioperative Pain

- A multidisciplinary approach (surgery, anesthesia, regional teams) in collaboration with the patient's primary prescriber and/or addiction psychiatrist should help guide the perioperative pain management of opioid-tolerant patients and patients receiving OUD medications
- Multimodal analgesic techniques, including both pharmacologic and nonpharmacologic modalities and regional/neuraxial anesthesia, should be employed throughout the perioperative period
- Opioids prescribed for chronic pain should be continued throughout the perioperative period (especially long-acting opioids), including the morning of surgery
- For patients treated with medications for OUD:
  - Buprenorphine (with or without naloxone) and methadone should generally be continued throughout the perioperative period
  - Naltrexone (intramuscular or oral) should be held preoperatively
- Patients should be given detailed discharge instructions, and close postoperative follow-up with the primary provider/prescriber is essential

LTOT = long-term oxygen therapy

Burns SL, et al. *Curr Opin Anaesthesiol*. 2022;35(4):514-520. Chou R, et al. *J Pain*. 2016;17(2):131-157.

Patient Case: MJ

PART 4: PERIOPERATIVE CONSIDERATIONS

- MJ requires back surgery
- Maintain full buprenorphine dose to reduce risk of withdrawal, pain destabilization, and relapse
- Intraoperative Management
- General anesthesia
- Adjunctive infusions for opioid-sparing analgesia:
  - Low-dose ketamine infusion
  - Lidocaine infusion
  - Magnesium sulfate
- IV acetaminophen and ketorolac
- Regional anesthesia considered as adjunct for incisional pain

IV = intravenous

Patient Case: MJ

PART 4: POSTOPERATIVE CONSIDERATIONS

- Buprenorphine 8 mg TID continued
- Short-acting IV fentanyl available for breakthrough pain
- Adjuvant medications:
  - Pregabalin for neuropathic pain
  - Tizanidine for muscle spasm
  - Acetaminophen Q6hr scheduled
  - Ibuprofen Q8hr hours as needed
- Nonpharmacologic modalities: cold therapy, early mobilization, patient education on pain expectations and functional goals

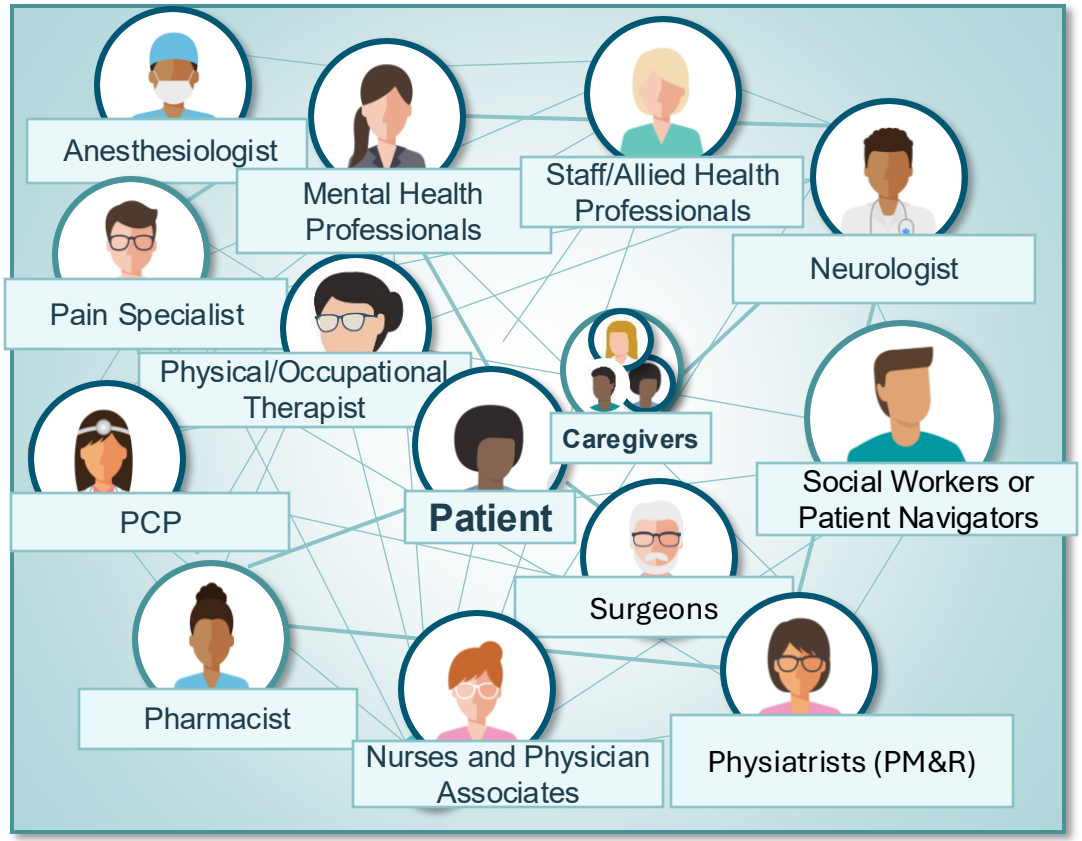
Peri- and Postoperative Pain Management for Patients on Chronic Opioid Treatment or MOUD

Medication	Perioperative Plan	Postoperative Plan
Long-acting pure mu-opioid agonists for chronic pain, including continuous transdermal use or intrathecal infusions	Continue typical dose throughout periop period including on DOS, in addition to sufficient intraop analgesia	Continue typical dose and provide opioid-tolerant dosing for PRN opioid orders, consider PCA if expect significant pain
Methadone	Continue typical dose throughout periop period including on DOS, in addition to sufficient intraop analgesia	Continue typical dose, may divide into Q6–8-hour dosing to maximize analgesic benefit Provide opioid-tolerant dosing for PRN opioid orders
Buprenorphine oral, sublingual, and buccal formulations including combination products with naloxone	Option 1: Continue typical dose throughout periop period including on DOS, in addition to sufficient intraop analgesia	Continue typical dose and provide opioid-tolerant dosing for PRN opioid orders
	Option 2: (consider if high risk for relapse and/or very painful procedure): Continue typical dose through day prior to surgery; temporarily increase and/or divide dosing into shorter intervals starting DOS, in addition to sufficient intraop analgesia	Continue increased and/or divided buprenorphine regimen and use opioid-tolerant dosing for PRN opioid orders Discharge on original/typical buprenorphine regimen with sufficient opioid-tolerant PRN opioid supply
Buprenorphine transdermal patch, subdermal implant, or subcutaneous implant	Continue typical dose throughout periop period including on DOS, in addition to sufficient intraop analgesia	Continue typical dose and provide opioid-tolerant dosing for PRN opioid orders
Naltrexone oral formulations	Discontinue 3 days prior to surgery and hold on DOS, provide usual intraop analgesia	Continue to hold therapy postop, provide opioid-naïve dosing for PRN opioid orders with close monitoring
Naltrexone extended-release IM injection	Ideally schedule surgery for ≥ 4 weeks after last injection and hold throughout periop period, provide usual intraop analgesia	Discontinue naltrexone at discharge and reinitiate with outpatient prescriber after pain recovery complete

DOS = day of surgery; PCA = patient-controlled analgesia

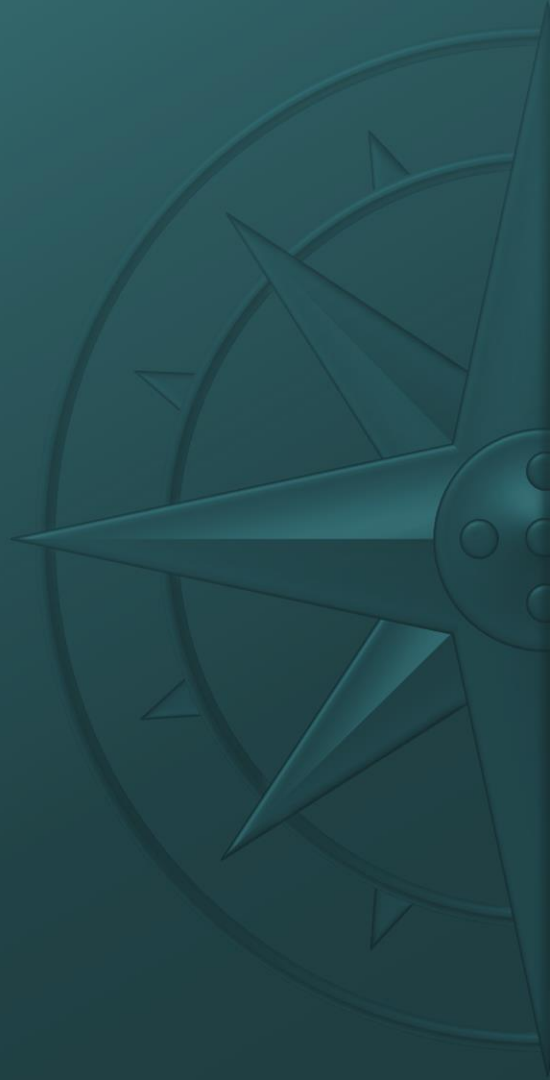
Hyland SJ, et al. *Healthcare (Basel)*. 2021;9(3):333.

Team-based Approach for the Management of Pain



Questions and Answers

Ask the Experts!



SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

Put information into action! In the next 3 months try to…

- Incorporate at least one biopsychosocial factor into my patient pain assessments to better individualize care
- Use a standardized pain assessment tool in at least 75% of new patient encounters involving pain
- Apply at least one CDC opioid prescribing recommendation during a clinical encounter (e.g., counseling a patient on naloxone use during a pain management visit)
- Provide at least one patient with education on multimodal pain management and safe storage or disposal of medications
- Approach patient conversations with an empathetic “safety first” mentality
- Ensure all treatment decisions take each patient’s baseline prescription use (e.g., PDMP) and pain history into consideration
- Use a validated tool (e.g., ORT) and provide counseling for at least one patient assessed for opioid misuse risk
- Integrate multimodal pain strategies for all patients with acute, chronic, and postoperative pain

CME OUTFITTERS

Visit the

Pain Management Hub

Free resources and education
for health care professionals and patients

https://www.cmeoutfitters.com/practice/pain-management/

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- Actively participate today by responding to ARS questions and/or asking the faculty questions
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